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CENTRAL INTELLIGENCE AGENCY

WASHINGTON, D.C. 20505.

P-7.10

25 JUN 1966

MEMORANDUM FOR : Comptroller, National Reconnaissance  
Office

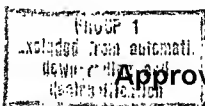
SUBJECT : Reprogramming of FY-66 Applied Research/  
Advanced Technology Funds

25X1 1. It is requested that you authorize reprogramming of the [ ] currently approved for Image Transducer Development to a new project. This new project is a design study of a Solid State Stellar Recording System (SSSRS) proposed by the Fairchild Camera and Instrument Corporation (FCIC).

2. OSP/CIA is in receipt of a proposal from FCIC for the development of a Solid State Stellar Recording System. The SSSRS is proposed as a device to determine the instantaneous orientation of the optical axis of large, satellite reconnaissance camera systems. Such data is essential to support the utilization of satellite photography for mensuration and mapping purposes. The SSSRS as proposed by FCIC has several important advantages over current techniques for deriving camera orientation information. The device images the stellar field through a linear photo-sensitive array rather than on silver halide film. The output of the device can be recorded either on main camera film or on magnetic tape. The use of a photo-sensitive array results in a high sensitivity device capable of a significantly higher sampling rate than is the case of current stellar cameras. Moreover, the basic instrument configuration appears to be sufficiently simple and compact to permit integral mounting with the main reconnaissance cameras. In addition, the output data is in digital form which makes possible timely and automatic data reduction for post-flight determination of camera orientation.

3. A preliminary examination of the FCIC proposal has lead to the conclusion that attitude accuracies on the order of 10 to 30 arc secs may be possible. Furthermore, presuming the feasibility of the SSSRS, the claimed advantages appear to be real - particularly the advantage of timely and automatic data reduction. However, there remain a number of important feasibility questions and, therefore, it is recommended that a preliminary analysis

NRO review(s) completed.



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effort be undertaken at FOCIS with the objective of conducting a detailed error analysis and preliminary system design.

4. Approval is requested to reprogram funds for this preliminary study effort from those currently approved for the Image Transducer Development project. It has been decided to defer the Image Transducer Development work until FY-67 pending review of the results of a company-funded effort in this area.

5. As the funds involved are FY-66 funds, your prompt consideration will be appreciated.

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[Redacted]  
Director of Reconnaissance, CIA

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